

**REMARKS**

**In the Claims**

Claims 1-39 were previously canceled without prejudice.

Claim 40 is currently pending.

Claims 41-53 are currently amended to change a formality to adhere to this registered patent practitioner's opinion on the introduction of claim dependency.

Claims 54-59 were previously canceled without prejudice.

Claims 60-85 are added.

Accordingly, claims 40-53 and 60-85 are pending.

**Additional Claim Fees**

**Claim Listing under 37 C.F.R. 1.121(c):**

Claims 40-53 and 60-85, now pending, are submitted below in accordance with 37 C.F.R. 1.121(c).

1 Applicant thanks Examiner Kimberly Lockett for the Examiner telephone  
2 interview on May 19, 2004. Applicant respectfully requests reconsideration and  
3 allowance of the subject application. Claims 1-39 were previously canceled  
4 without prejudice. Claims 54-59 were previously cancelled without prejudice in  
5 order to facilitate allowance and issuance of claims 40-53. Claims 60-85 are  
6 added in this preliminary amendment. Accordingly, claims 40-53 and 60-85 are  
7 pending.

8 The amendments of claims 41-53 are made to clarify the claims and are not  
9 intended to limit the scope of equivalents to which any claim element may be  
10 entitled. Applicant respectfully requests reconsideration of the above-identified  
11 application in view of the amendments above and the remarks that follow.

#### 12 13 **Examiner Interview**

14 A telephonic interview was conducted by Applicant Attorney Michael G.  
15 Smith on May 19, 2004 with Examiner Lockett. In the interview, Examiner  
16 Lockett indicated that claims 40-53 were allowable over the obviousness-type  
17 double-patenting rejection in the Office Action dated November 19, 2004 because  
18 of the absence of "a unitary component formed from a single folded or bent plate  
19 material with a base plate portion and a spring portion so that said unitary  
20 component is connected directly to the springs" in the cited references.  
21 Accordingly, Applicant submits this Preliminary Amendment of the Request for  
22 Continuing Examination with claims 40-53 pending in the condition that Examiner  
23 Lockett indicated are allowable, including changes to claims 41-53 to make claim  
24 dependency clear.  
25

**Claim for Priority**

The present application (10/930,279) is a national stage application filed under 35 USC § 371. Applicant requests acknowledgment that the present application has met the requirements of 35 USC § 371 and that the filing date is the international filing date of PCT application PCT/US98/20376, filed on 10/29/1998.

**Request For Reconsideration**

**I. Obvious Type Double Patenting Rejection**

Claims 40-53 were rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over all the claims of US Patent 6,563,034 and US Patent 5,986,191. Applicant respectfully traverses these grounds for rejection.

The Examiner has the burden to show that (1) the inventions claimed (2) are not patentably distinct and (3) are based on a prima facie showing of obviousness. This analysis must be based on what the claim defines and not on the claim language itself, as required by the Federal Circuit:

[I]t is important to bear in mind that comparison can be made only with what invention is *claimed* in the earlier patent, paying careful attention to the rules of claim interpretation to determine what invention a claim *defines* and not looking to the claim language for anything that happens to be mentioned in it as though it were a prior art reference. ... [W]hat is claimed is what is *defined by the claim taken as a whole*, every claim limitation ... being material. *General Foods Corp. V. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 23 USPQ 2d, 1839, 1845 (Fed. Cir. 1992). (emphasis in original.)

Applicant respectfully submits that the Office Action has not made a prima facie case of judicially-created obviousness-type double patenting because the Examiner did not consider the US Patent 6,563,034 claims as a whole. Instead,

1 the Examiner picked certain elements of the US Patent 6,563,034 claims to  
2 combine with US Patent 5,986,191 while ignoring other elements of the US Patent  
3 6,563,034 as if the US Patent 6,563,034 claims were a prior art reference, which is  
4 expressly prohibited by the doctrine of non-statutory double patenting. For  
5 example, the Examiner ignored the "separate means ...additional contact point for  
6 gripping said at least one of said strings" elements in the 6,563,034 claims, which  
7 are not present in applicant's claims.

8 Assuming, arguendo, that we accept the examiner's assertion as to the  
9 differences between the instant invention and the art of record. The examiner  
10 points to column 2, lines 46-48, of either US Patent 6,563,034 or US Patent  
11 5,986,191 for a disclosure of the "unitary component." The unitary component,  
12 however, is not disclosed at the reference point mentioned by the examiner. In  
13 fact, the unitary component as claimed is not disclosed in either of the cited  
14 patents. The examiner has not made a prima facie case of judicially-created  
15 obvious-type double patenting.

16 Therefore, since the claims of US Patent 6,563,034 have one or more  
17 element not found in the present claims, the double patenting rejection should be  
18 withdrawn. Alternatively, since the unitary component is not disclosed in either  
19 US Patent 6,563,034 or US Patent 5,986,191 the double patenting rejection should  
20 be withdrawn.

### 21 New Claims

22 New claims 60-72 are allowable for the same reason that claims 40-53 are  
23 allowable in the opinion of Examiner Lockett stated in the Examiner Interview on  
24 May 19, 2004: The absence of "a unitary component formed from a single folded  
25 or bent plate material with a base plate portion and a spring portion so that said  
unitary component is connected directly to the springs" in the cited references.

New claims 73-78 are allowable because none of the cited references  
disclose "at least one string is rendered substantially inextensible between said

second critical point and said string anchor.”

New claims 79-82 are allowable because none of the cited references disclose “a bent plate so that said bent plate is connected directly to the biasing element.” The “bent plate ...connected directly to the biasing element” is unique, and therefore, claims 79-82 are allowable.

New claims 83-85 are allowable because none of the cited references disclose:

“a bearing portion creating the pivot axis on said fulcrum tremolo, said bearing portion comprising at least one bearing portion, said bearing portion further comprising at least a portion of a ball bearing surface and at least one shaft connected to said fulcrum tremolo.”

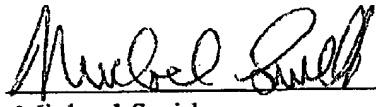
Therefore, claims 83-85 are also allowable.

### **Conclusion**

All pending claims 40-53 and 60-85 are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the subject application. If any issues remain that prevent issuance of this application, the Examiner is urged to contact the undersigned applicant before issuing a subsequent Action.

Respectfully Submitted,

Dated: 7-22-04

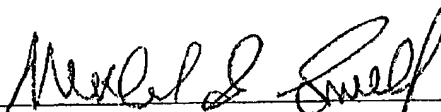
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**Marked Up Version Of The Pending Claims under 37 C.F.R. 1.121(c)(1)(ii):**

Amend claims 40-43, 45-46, 50 as follows and in accordance with 37 C.F.R. 1.121(c), by which the Applicant submits the following marked up version, wherein the markings are shown by strikethrough (for deleted matter) and/or underlining (for added matter):

1-39. (previously canceled without prejudice)

40. (previously presented): A stringed musical instrument comprising:

an elongated neck,

a body attached to one end of said neck,

a tremolo pivotably mounted on said body,

a plurality of strings with a first end and a second end,

on said neck, a first critical point on at least one of said strings,

said tremolo further comprising:

bridge elements forming a support and a second critical point for at least one of said strings,

a string anchor engaging said second end of said at least one of said strings,

a base plate,

a spring, and

counter springs with a first end and a second end, said first end of

said counter springs connected to said body and said second

end of said counter springs secured to said spring for counter

balancing the tension of said at least one of said strings,

wherein said base plate and said spring further comprises:

a unitary component formed from a single folded or bent

plate material with a base plate portion and a spring

portion so that said unitary component is connected  
directly to the springs.

41. (currently amended): TheAn apparatus of claim 40 wherein said string  
anchor is located in said portion.

42. (currently amended): TheAn apparatus of claim 41 wherein said string  
anchor further comprises at least one string passageway within said spring portion.

43. (currently amended): TheAn apparatus of claim 42 wherein said base plate  
portion further comprises at least one string hole for threading said at least one of  
said strings and said at least one string passageway is aligned to said openings in  
said base portion.

44. (currently amended): TheAn apparatus of claim 40 wherein said base plate  
portion is formed to create at least one tier for displacing the height of at least one  
said bridge elements relative to said body.

45. (currently amended): TheAn apparatus of claim 40 wherein said tremolo  
further comprises a fulcrum tremolo.

46. (currently amended): TheAn apparatus of claim 40 wherein said unitary  
component has at least one reinforcement arranged between said base plate portion  
and said spring portion.

47. (currently amended): TheAn apparatus of claim 46 wherein said unitary  
component is formed to create said at least one reinforcement.



1 48. (currently amended): ~~The~~An apparatus of claim 40 wherein said tremolo  
2 further comprises a macro-tuner.

3 49. (currently amended): ~~The~~An apparatus of claim 40 wherein said tremolo  
4 further comprises a global-tuner.

5 50. (currently amended): ~~The~~An apparatus of claim 45 wherein said fulcrum  
6 tremolo further comprises a bearing for adjustably mounting said fulcrum tremolo  
7 on said body for pivotal displacement and said bearing further comprises at least a  
8 portion of a ball bearing surface.

9 51. (currently amended): ~~The~~An apparatus of claim 42 wherein said tremolo  
10 further comprises a global-tuner.

11 52. (currently amended): ~~The~~An apparatus of claim 44 wherein said tremolo  
12 further comprises a macro-tuner.

13 53. (currently amended): ~~The~~An apparatus of claim 44 wherein said tremolo  
14 further comprises a global-tuner.

15 54-59. (previously canceled without prejudice)

16 60. (new): A stringed musical instrument comprising:  
17  
18 an elongated neck,  
19 a body attached to one end of said neck,  
20 a tremolo pivotably mounted on said body;  
21 a plurality of strings with a first end and a second end,  
22 on said neck, a first critical point on at least one of said strings,  
23 said tremolo further comprising:  
24  
25

1 bridge elements forming a support and a second critical point for at  
2 least one of said strings,  
3 a string anchor engaging said second end of said at least one of said  
4 strings,  
5 a base plate,  
6 a spring holder, and  
7 counter springs with a first end and a second end, said first end of  
8 said counter springs connected to said body and said second  
9 end of said counter springs secured to said spring holder for  
10 counter balancing the tension of said at least one of said  
11 strings,

12 wherein said base plate and said spring holder further comprises:

13 a unitary component formed from a single folded or bent plate  
14 material with a base plate portion and a spring portion so that  
15 said unitary component is connected directly to the springs.

16  
17 61. (new): The apparatus of claim 60 wherein said string anchor is located in  
18 said spring portion.

19  
20 62. (new): The apparatus of claim 61 wherein said string anchor further  
21 comprises at least one string passageway within said spring portion.

22  
23 63. (new): The apparatus of claim 62 wherein said base plate portion further  
24 comprises at least one string hole for threading said at least one of said strings and  
25 said at least one string passageway is aligned to said at least one string hole in said  
base plate portion.

1 64. (new): The apparatus of claim 60 wherein said base plate portion is formed  
2 to create at least one tier for displacing the height of at least one said bridge  
3 elements relative to said body.

4 65. (new): The apparatus of claim 60 wherein said tremolo further comprises a  
5 fulcrum tremolo wherein said base plate is pivotally mounted about a fulcrum axis  
6 that is extending transverse to the axis of said strings for changing the pitch of all  
7 said strings at one time as said base plate is pivoted.

8 66. (new): The apparatus of claim 65 wherein said fulcrum tremolo further  
9 comprises a global tuner.

10  
11 67. (new): The apparatus of claim 65 wherein the fulcrum tremolo further  
12 comprises a bearing for pivotably mounting said fulcrum tremolo on said  
13 body and said bearing further comprises at least a portion of a ball bearing  
14 surface.

15  
16 68. (new): The apparatus of claim 67 wherein said fulcrum tremolo further  
17 comprises:  
18 a string tensioner positioned on the opposite side of said bridge elements  
19 from the first critical point on said unitary component to raise and  
20 adjust the tension of said strings from an untensioned condition to a  
21 proper playing pitch,

22 wherein said string tensioner has a string holder element comprising:

23 a first portion closer to said second critical point,

24 a second portion more remote from said second critical point, and  
25

1 a restricted interior portion located in said second portion, said  
2 restricted interior portion of string holder element holds said  
3 string anchoring portion,  
4 said string holder element being displaceable between a first limiting  
5 position closest said second critical point and a second limiting  
6 position more remote said second critical point,  
7 said first end of said string holder element in spaced relation from said  
8 second critical point in and between said first and second limiting  
9 positions,  
10 wherein said string anchoring portion is located a critical distance from said  
11 second critical point such that said at least one string is rendered  
12 substantially inextensible between said second critical point and said  
13 string anchor.

14 69. (new): The apparatus of claim 67 wherein said fulcrum tremolo further  
15 comprises a global tuner.

16 71. (new): The apparatus of claim 67 wherein said fulcrum tremolo further  
17 comprises:  
18 at least one string anchor located on the opposite side of said second critical  
19 point from said first critical point and positioned a critical distance  
20 from said second critical point such that said at least one string is  
21 rendered substantially inextensible between said second critical point  
22 and said string anchor.

23 71. (new): The apparatus of claim 67 wherein said bearing further comprises:  
24 a ring bearing, and  
25

1 a vertical adjustment screw for vertically displacing the base relative to the  
2 body, wherein the vertical adjustment screw intersects the pivot axis.

3 72. (new): The apparatus of claim 71 wherein said fulcrum tremolo further  
4 comprises:

5 a string tensioner positioned on the opposite side of said bridge elements  
6 from the first critical point on said unitary component to raise and  
7 adjust the tension of said strings from an untensioned condition to a  
8 proper playing pitch,

9 wherein said string tensioner has a string holder element further comprises:

10 a first portion closer to said second critical point,

11 a second portion more remote from said second critical point, and

12 a restricted interior portion located in said second portion, said  
13 restricted interior portion of string holder element holds said  
14 string anchoring portion,

15 said string holder element being displaceable between a first limiting  
16 position closest said second critical point and a second limiting  
17 position more remote said second critical point,

18 said first end of said string holder element in spaced relation from said  
19 second critical point in and between said first and second limiting  
20 positions,

21 wherein said string anchoring portion is located a critical distance from said  
22 second critical point such that said at least one string is rendered  
23 substantially inextensible between said second critical point and said  
24 string anchor.  
25

73. (new): A stringed musical instrument comprising:  
a body,  
a neck extending outwardly from said body,  
at least one string extending from said body to said neck, said at least one  
string having a first end and a second end, said second end of at least  
one string having an anchoring portion that is thicker than the  
diameter of said at least one string,  
a first critical point for said at least one string on said neck,  
a second critical point for said at least one string on a fulcrum tremolo,  
said fulcrum tremolo includes a base plate,  
said base plate being pivotally mounted about a fulcrum axis extending  
transversely of said strings for changing the pitch of all said strings  
at one time as said base plate is pivoted,  
a string anchor to receive said anchoring portion located on said base,  
wherein at least one string anchor located on the opposite side of said  
second critical point from said first critical point and positioned a  
critical distance from said second critical point such that said at least  
one string is rendered substantially inextensible between said second  
critical point and said string anchor.

74. (new): The apparatus of claim 63 wherein said anchoring portion further  
comprises wrappings wherein the length of said wrappings being slightly less than  
the distance between the second critical point and said string anchor.

75. (new): Tuning apparatus for a stringed musical instrument comprising:  
a body,  
a neck extending outwardly from said body,  
at least one string extending from said body to said neck, said at least one  
string having a first end and a second end, said second end of said at

1 least one string having an anchoring portion that is thicker than the  
2 diameter of said at least one string,  
3 a first critical point for said at least one string on said neck,  
4 a second critical point said at least one string on a fulcrum tremolo,  
5 said fulcrum tremolo includes a base plate, said base plate being pivotally  
6 mounted about a fulcrum axis extending transversely of said strings  
7 for changing the pitch of all said strings at one time as said base  
8 plate is pivoted,  
9 a string tensioner positioned on the opposite side of said bridge elements  
10 from the first critical point to raise and adjust the tension of said  
11 strings from an untensioned condition to a proper playing pitch,  
12 wherein said string tensioner has a string holder element comprising:  
13 a first portion closer to said second critical point, and  
14 a second portion more remote from said second critical point and a  
15 restricted interior portion located in said second portion, said  
16 restricted interior portion of string holder element holds said  
17 string anchoring portion,  
18 said string holder element being displaceable between a first limiting  
19 position closest said second critical point and a second  
20 limiting position more remote said second critical point,  
21 said first end of said string holder element in spaced relation from  
22 said second critical point in and between said first and second  
23 limiting positions,  
24 said restricted interior portion of said string holder element holds  
25 said anchoring portion wherein said anchoring portion is  
located a critical distance from said second critical point such  
that said at least one string is rendered substantially  
inextensible between said second critical point and said string  
anchor.

1 76. (new): The tuning apparatus of claim 75 wherein said anchoring portion  
2 further comprises wrappings and the length of said wrappings being slightly less  
3 than the distance between the second critical point and said string anchor.  
4

5 77. (new): A stringed musical instrument comprising:  
6 an elongated neck;  
7 a body attached to one end of the said neck,  
8 a plurality of strings with a first end and a second end, said second end of  
9 said strings having an anchoring portion that is thicker than the  
10 diameter of said string,  
11 a first critical point for each of said strings on said neck,  
12 a fulcrum tremolo, said fulcrum tremolo including at least one bridge  
13 clement forming a support and a second critical point for at least one  
14 of said strings, said fulcrum tremolo including a base plate, said base  
15 plate being pivotally mounted about a fulcrum axis that is extending  
16 transverse to the axis of said strings for changing the pitch of all said  
17 strings at one time as said base plate is pivoted,  
18 a string anchor to engage said second end of said at least one of said strings,  
19 a spring holder,  
20 counter springs with a first end and a second end, said first end of said  
21 counter springs connected to said body and said second end of said  
22 counter springs secured to said spring holder to counter balance  
23 tension of said at least one of said strings,  
24 said base plate and said spring holder further comprises a unitary  
25 component formed from a single folded or bent plate material with a  
base plate portion,



wherein the spring holder is formed into a portion of the unitary component  
so that said unitary component is connected directly to the counter  
springs,

wherein said string anchor is located in said spring holder portion, said  
string anchor further comprises at least one string passageway within  
said spring holder portion, said base plate portion further comprises  
string holes for threading said at least one of said strings and said at  
least one string passageway is aligned to said openings in said base  
portion,

wherein an alternate string anchor is positioned on the opposite side of at  
least one said second critical point from said first critical point and  
located a critical distance from said second critical point such that  
said at least one string is rendered substantially inextensible between  
said second critical point and said string anchor.

78. (new): The stringed musical instrument of claim 77 wherein said alternate  
string anchor further comprises:

a separate mount of said strings on said base plate to raise and to adjust the  
tension of said strings from an untensioned condition to a proper  
playing pitch,

said separate mount includes a string tensioner on opposite side of said  
bridge element from said first critical point,

said string tensioner has a string holder element,

said string holder element has a first portion closer to said second critical  
point and a second portion more remote from said second critical  
point,

said string holder element includes a restricted interior portion located in  
said second portion,

1 said string holder element being displaceable between a first limiting  
2 position closest said second critical point and a second limiting  
3 position more remote said second critical point,  
4 said first end of said string holder element in spaced relation from said  
5 second critical point in and between said first and second limiting  
6 positions,  
7 said restricted interior portion of said string holder element holds said  
8 anchoring portion wherein said anchoring portion is located a critical  
9 distance from said second critical point such that said at least one  
10 string is rendered substantially inextensible between said second  
11 critical point and said string anchor.

- 11 79. (new): A stringed musical instrument comprising:  
12 at least one string with a first end and a second end;  
13 an elongated neck,  
14 a body attached to one end of said neck,  
15 a fulcrum tremolo,  
16 said fulcrum tremolo is pivotally mounted about a fulcrum axis that is  
17 transverse the axis of said at least one said string for changing the  
18 pitch of said at least one of said string,  
19 a nut on said neck to form a first critical point and support said at least one  
20 said string,  
21 the fulcrum tremolo further comprising:  
22 at least one bridge element to form a second critical point and to support  
23 said at least one said string,  
24 a string anchor engaging said second end of said at least one said string  
25 further comprising a base portion,  
a biasing element connected to the body wherein the biasing force of the  
biasing element tends to pivot the fulcrum tremolo in a first direction

1                   against the tendency to pivot the base in a second direction in  
2                   response to the tension in the strings; and  
3                   wherein said fulcrum tremolo further comprises a bent plate so that said  
4                   bent plate is connected directly to the biasing element.

5       80.     (new): The stringed musical instrument of claim 79 wherein said fulcrum  
6       tremolo further comprises a bearing for adjustably mounting said fulcrum tremolo  
7       on said body for pivotal displacement and said bearing further comprises at least a  
8       portion of a ball bearing surface.

9       81.     (new): The stringed musical instrument of claim 80 wherein said base  
10      portion is formed to create at least one tier for displacing the height of at least one  
11      said bridge elements relative to said body.

12      82.     (new): The stringed musical instrument of claim 81 wherein said at least a  
13      portion of a ball bearing surface further comprises at least one ring bearing;  
14              said at least one ring bearing further comprises an outer portion and an  
15              inner portion and said inner portion essentially pivots with said  
16              string anchor as said fulcrum tremolo is pivoted for changing the  
17              pitch of said at least one said string.

18  
19      83.     (new): A fulcrum tremolo operable with a musical instrument, the musical  
20      instrument comprising:

21              a body,

22              a neck having a nut, and

23              at least one string connected to the body and the neck;

24      the fulcrum tremolo comprising:  
25

1 a base mounted to the body, the base having a first end closer the nut  
2 and a second end further from the nut,  
3 the fulcrum tremolo having a pivot axis that is transverse the  
4 direction of at least one string,  
5 a tremolo arm manually operable to pivot the base about the fulcrum  
6 axis to produce a tremolo effect,  
7 a bearing portion creating the pivot axis on said fulcrum tremolo,  
8 said bearing portion comprising at least one bearing portion,  
9 said bearing portion further comprising at least a portion of a  
10 ball bearing surface and at least one shaft connected to said  
11 fulcrum tremolo, and  
12 at least one vertical adjustment screw for vertically displacing the  
13 base relative to the body, the vertical adjustment screw  
14 having a vertical axis,  
15 wherein said pivot axis is positioned within an area beginning with  
16 and including the vertical axis and extending to the second  
17 end of said base.

18 84. (new): The fulcrum tremolo of claim 83 wherein said at least one bearing  
19 portion further comprises an inner portion and an outer portion, the inner portion is  
20 connected to the fulcrum tremolo so that the inner portion essentially pivots with  
21 the base while the outer portion essentially maintains its relative position to the  
22 adjustment screw when the fulcrum tremolo is pivoted to produce the tremolo  
23 effect.

24 85. (new): The fulcrum tremolo of claim 84 wherein said at least one bearing  
25 portion further comprises an inner portion and an outer portion, the inner portion is  
connected to the fulcrum tremolo so that the outer portion essentially pivots with

1 the base while the inner portion essentially maintains its relative position to the  
2 adjustment screw when the fulcrum tremolo is pivoted to produce the tremolo  
3 effect.  
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